

## FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST

FMEA NUMBER: EC-STBD04-01      ORIGINATOR:      JSC      PROJECT: EDFT-03

PART NAME: RU RECEIVER/LATCH ASSY      LRU/ORU PART NUMBER: SED39126455-301      QUANTITY: 1  
 PART NUMBER: SED39126458-301      LRU/ORU PART NAME: SURF      SYSTEM: GFE  
 LSC CONTROL NO: N/A      DRAWING/REF DESIGNATOR: SEE P/N      SUBSYSTEM: EVA  
 ZONE/LOCATION: STBD-4      EFFECTIVITY/AFFECT STAGE: STS-72

### CRITICALITY:

CRITICAL ITEM: No      SUCCESS PATHS: 3  
 CRITICALITY CATEGORY: 1R/3      SUCCESS PATH REMAINING: 2

END ITEM NAME: N/A  
 END ITEM FUNCTIONAL: N/A  
 END ITEM CAPABILITY: N/A  
 END ITEM FAILURE TOLERANCE: N/A

### REDUNDANCY SCREENS:

- A/1. C/O PRELAUNCH: Pass
2. C/O ON ORBIT: N/A for NSTS
- B/3. DETECTION FLIGHT CREW: Pass
4. DETECTION GROUND CREW: N/A
- C/5. LOSS OF REDUNDANCY FROM SINGLE CAUSE: Pass

FUNCTION: The RU Guide and Latch Assy. is designed to capture a Probe on the RU. This will hold the RU in its deployed position.

FAILURE MODE CODE: N/A for NSTS

FAILURE MODE: Latch Jams.

CAUSE: Contamination, galling, piece part defect, wear.

REMAINING PATHS: 1- EVA bolts holding SURF.      EFFECT/MISSION PHASE: EVA  
 2- Fold RU at hinge, remove RU from PRUM and slide probe out of latch.

CORRECTIVE ACTION: Remove SURF and Jettison.

### -FAILURE EFFECTS-

END ITEM/LRU/ORU/ASSEMBLY: RU stuck in deployed position if latch jams.

SUBSYSTEM/NEXT ASSEMBLY/INTERFACE: N/A

SYSTEM/END ITEM/MISSION: Partial loss of DTO.

CREW/VEHICLE : RU cannot be returned in the extended position across the PLB. The RU must be stowed back into its original launch restraints or jettisoned. If left deployed, deorbit/landing loads will cause a structural failure in the RU or FSE resulting in loose hardware in the PLB which may collide with vehicle.

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**FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST**


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FMEA NUMBER: EC-STBD04-01      ORIGINATOR:      ESC      PROJECT: EDFT-03

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PART NAME: RU RECEIVER/LAT ASY      LRU/ORU PART NUMBER: SEDS9126455-301      QUANTITY: 1  
 PART NUMBER: SED39126458-301      LRU/ORU PART NAME: SURF      SYSTEM: GFE  
 LSC CONTROL NO: N/A      DRAWING/REF DESIGNATOR: SEE P/N      SUBSYSTEM: EVA  
 ZONE/LOCATION: STBD-4      EFFECTIVITY/AFFECT STAGE: STS-72

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**HAZARD INFORMATION:**

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HAZARD: N/A

HAZARD ORGANIZATION CODE: N/A

HAZARD NUMBER: N/A

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TIME TO EFFECT: hours

TIME TO DETECT: seconds

TIME TO CORRECT: minutes

FAILURE DETECTION/FLIGHT: Visual

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**REMARKS:**

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**-RATIONALE FOR ACCEPTABILITY-**

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(A) DESIGN: N/A

(B) TEST: N/A

(C) INSPECTION: N/A

(D) FAILURE HISTORY: N/A

(E) OPERATIONAL USE: N/A

(F) MAINTAINABILITY: N/A

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PREPARED BY: G. Wright

REVISION:

DATE: 5/7/95

WAIVER NUMBER:

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